

(12) United States Patent Bills

(54) PLUMBING INSERT REMOVAL TOOL

(71) Applicant: Rodney Bills, Canfield, OH (US)

(72) Inventor: Rodney Bills, Canfield, OH (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35 U.S.C. 154(b) by 352 days.

(21) Appl. No.: 14/534,643

Filed: Nov. 6, 2014 (22)

(65)**Prior Publication Data**

> US 2015/0059146 A1 Mar. 5, 2015

Related U.S. Application Data

- Continuation of application No. 13/302,102, filed on Nov. 22, 2011, now abandoned.
- (60) Provisional application No. 61/418,011, filed on Nov. 30, 2010.
- (51) Int. Cl. B25B 13/54 (2006.01)B25B 13/48 (2006.01)
- (52) U.S. Cl. CPC B25B 13/54 (2013.01); B25B 13/48 (2013.01); Y10T 29/49822 (2015.01)

US 9,636,807 B2 (10) Patent No.: (45) Date of Patent: May 2, 2017

(58) Field of Classification Search

CPC B25B 13/5083; B25B 13/54; B25B 13/48; B25B 15/008; B25B 23/105; B25B 13/06; B25B 5/147; B25B 7/00; B25B 7/16 See application file for complete search history.

(56)References Cited

U.S. PATENT DOCUMENTS

2,482,501	A *	9/1949	Oravetz B25B 13/5083
			81/446
5,622,091	A *	4/1997	Crook B25B 13/48
			81/441
6,343,411	B1*	2/2002	Sigman B25B 13/44
			29/263
6,675,679	B2 *	1/2004	Dugan B25B 13/5083
			81/442

* cited by examiner

Primary Examiner — Robert Scruggs (74) Attorney, Agent, or Firm — Robert G. Lev

(57)ABSTRACT

An internal plumbing wrench is arranged for internally gripping a plumbing insert, such as those used in sinks and the like. The internal wrench includes a split gripping section which is adjustable by the cam action of a hexagonal core. A central shaft has a foot extending 90° away from the longitudinal axis of the shaft and is arranged to extend into pipes connected to the insert to hold a broken pieces and permit separation of the insert from any pipe pieces attached thereto.

16 Claims, 4 Drawing Sheets

